Crude Oil Odor Information

Some members of the public have reported smelling odors that may be associated with the release of oil from the Deepwater Horizon. The main compounds responsible for giving rise to odors associated with crude oil have been shown to be mainly sulfur compounds and cyclic compounds. These compounds can be smelled at very low levels, often times below levels that are harmful. Consequently, simply smelling the crude oil odor does not mean you are being exposed to harmful levels.

Air quality testing is being conducted throughout a very wide geographic area to ensure that the air is safe. To date, detectable levels of crude oil vapors are very low even within the spill area. Air testing being performed near public areas so far have shown no detections of volatile compounds from crude oil.

Sample results from the Deepwater Horizon crude oil spill show that the crude oil type can be classified as a "light sweet crude". *Light sweet crude oil* is the form of petroleum that oil refineries prefer because it contains exceptionally high amounts of the chemicals needed to produce gasoline, kerosene, and high-quality crude oil. "Sweet" is a description of how much sulphur is in the oil. In the 19th century, oil workers would taste and smell small amount of oil to determine its quality. Crude oil with low sulphur content had a mildly sweet taste and pleasant smell. Therefore, "sweet" crude is a low sulfur crude oil.

When crude oil is released in the environment, its composition changes as a result of "weathering." Weathering processes include evaporation and others. Evaporation occurs mainly during the first 24-48 hours after release which greatly reduces the amount of volatile components. Some crude oils may lose up to 40% of their volume due to evaporation in the first few days after a release. The substance remaining after evaporation is called weathered crude oil. Thus, the composition of any released product remaining in the affected area is likely to be substantially different than the originally released crude oil. Due to the weathering process, the remaining product is generally considered to have less potential for causing adverse health effects.